

# COAL PROPERTIES ANALYSIS

Tax Year 2003

September 1, 2002  
Rebecca Melton Craig  
State Tax Commissioner  
Department of Tax and Revenue

# PRODUCING COAL CAPITALIZATION RATE

## Capitalization Rate Analysis and Results:

In developing a capitalization rate for use in valuing specific income-producing properties consideration is given to the three approaches generally employed in estimating a discount rate. As a matter of practicality, the Bands-of-Investment and Summation Technique approaches are utilized in establishing discount rates for active coal. Data for analysis has been derived in accordance with current Legislative Rule Title 110, Series 11.

<u>Safe Rate</u>	90 day Treasury Bills			<u>Safe Rate</u>
January	December	2001		3.469%
January	December	2000		5.818%
January	December	1999		4.660%

<u>Risk Rate</u>	Interest differential between Loan Rate and 90 day Treasury Bills			<u>Debt Risk Rate</u>
	<u>Loan Rate*</u>			
	2001	8.922%		5.453%
	2000	11.233%		5.415%
	1999	9.994%		5.334%
	*Prime plus 2%			

<u>Equity</u>	Differential between Equity Rates and 90 day Treasury Bills			<u>Equity Risk Rate</u>
	<u>Equity Rate**</u>			
	2001	[13.5%/(1-.30)]-3.469		15.817%
	2000	[13.5%/(1-.30)]-5.818		13.468%
	1999	[13%/(1-.29)]-4.660		13.650%
	** Moody's Handbook on Common Stocks and Value Line Investment Analysis			

<u>Composite Risk Rate</u>	Loan and Equity Rates weighted by industry estimated capital structure.		
	<u>Equity Rate</u>	<u>Debt Rate</u>	<u>Composite Risk</u>
2001	9.490%	2.181%	11.671%
2000	8.081%	2.166%	10.247%
1999	8.190%	2.134%	10.324%
Note: Debt equity Ratio		Debt 40%	Equity 60%

<u>Non Liquidity Rate</u>	Interest differential between 90 day Treasury Bills and a 1 year Treasury Bill which reflects a reasonable time necessary to sell active property.			<u>1yr T Bill</u>	<u>90 d T Bill</u>	<u>Non Liquidity Rate</u>
January	December	2001		3.481%	3.469%	0.012%
January	December	2000		5.777%	5.818%	0.000%
January	December	1999		5.078%	4.660%	0.418%

<u>Management Rate</u>	Charges for the management of investment portfolios.	
Fixed Rate (by Rule)	0.500%	

<u>Inflation Rate</u>			
January	December	2001	1.600%
January	December	2000	3.400%
January	December	1999	2.700%

<u>Capitalization Rate</u>	Since the valuation of active coal property is predicated on a three year production average, the capitalization rate is considered in a similar manner.		
	<u>2001</u>	<u>2000</u>	<u>1999</u>
Inflation Rate	-1.600%	-3.400%	-2.700%
Safe Rate	3.469%	5.818%	4.660%
Composite Risk Rate	11.671%	10.247%	10.324%
Non Liquidity Rate	0.012%	0.000%	0.418%
Management Rate	0.500%	0.500%	0.500%
Total	14.052%	13.165%	13.202%

Three Yr Average: 13.473 Rounded to: 13.50%

CAPITALIZATION RATE - 13.50%			
MULTIPLIERS:	%		%
1YR	0.939	9YR	5.367
2YR	1.766	10YR	5.667
3YR	2.494	11YR	5.932
4YR	3.136	12YR	6.165
5YR	3.702	13YR	6.37
6YR	4.2	14YR	6.551
7YR	4.639	15YR	6.711
8YR	5.026		

# **OIL AND GAS PROPERTIES ANALYSIS**

**Tax Year 2003**

**September 1, 2002  
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**OIL AND GAS**

Capitalization Rate Analysis and Results:

In developing a capitalization rate for use in valuing specific income-producing properties consideration is given to the three approaches generally employed in estimating a discount rate. As a matter of practicality, the Bands-of -Investment and Summation Technique approaches are utilized in establishing discount rates for producing oil and gas properties. Data for analysis has been derived in accordance with current Legislative Rule Title 110, Series 1J.

<u>Safe Rate</u>	( 90 day Treasury Bills)			
	January	December	2001	3.470%

<u>Risk Rate</u>	(Interest differential between Loan Rate and 90 day Treasury Bills)		
	<u>Loan Rate*</u>		<u>Risk Rate</u>
	2001	8.9200%	5.4500%
	*Prime plus 2%		

<u>Equity</u>	(Differential between Equity Rates and 90 day Treasury Bills)		
	<u>Equity Rate**</u>		<u>Safe Rate</u>
	2001	$[13.5\%/(1-.37)]-3.47$	17.9586%
	<i>** Moody's Handbook on Common Stocks and Value Line Investment Analysis</i>		

<u>Composite Risk Rate</u>	Loan and Equity Rates weighted by industry estimated capital structure.				
	<u>Equity Rate</u>		<u>Debt Rate</u>		<u>Composite Risk</u>
	2001	9.8772%	2.4525%		12.843% ***
	Note: Debt equity Ratio		Debt	45%	Equity 55%
	*** Effective severance tax adjustment		0.96		

<u>Non Liquidity Rate</u>					
Interest differential between 90 day Treasury Bills and a 1 year Treasury Bill which reflects a reasonable time necessary to sell active property.					
			<u>1yr T Bill</u>	<u>90 day T Bill</u>	<u>Non Liquidity Rate</u>
January	December	2001	3.480%	3.470%	0.010%

<u>Management Rate</u>	Charges for the management of investment portfolios.	
	Fixed Rate (by Rule)	0.500%

<u>Property Tax Rate</u>	Sixty percent (60%) of State average Class III property tax rate.		
	2001	60% of 2.25=	1.350%

<u>Inflation Rate</u>				
	January	December	2001	1.600%

**Capitalization Rate**

Since the valuation of oil and gas property is predicated on a one year production, the capitalization rate will be considered in a similar manner.

	<u>2001</u>
Inflation Rate	-1.600%
Safe Rate	3.470%
Composite Risk Rate	12.843%
Non Liquidity Rate	0.010%
Management Rate	0.500%
Property Tax Rate	<u>1.350%</u>
Total	16.573%

Capitalization Rate Rounded to:

16.50%
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**MULTIPLIERS FOR 16.50% MID-YEAR LIFE (ANNUALLY)**

<u>YEAR</u>	<u>%</u>	<u>YEAR</u>	<u>%</u>
1	0.926482	21	0.043684
2	0.795264	22	0.037497
3	0.682630	23	0.032186
4	0.585948	24	0.027627
5	0.502960	25	0.023715
6	0.431725	26	0.020356
7	0.370580	27	0.017473
8	0.318094	28	0.014998
9	0.273042	29	0.012874
10	0.234371	30	0.011051
11	0.201177	31	0.009485
12	0.172684	32	0.008142
13	0.148227	33	0.006989
14	0.127233	34	0.005999
15	0.109213	35	0.005149
16	0.093745	36	0.004420
17	0.080468	37	0.003794
18	0.069071	38	0.003257
19	0.059288	39	0.002795
20	0.050891	40	0.002400

**OTHER MINED MINERAL  
PROPERTY ANALYSIS**

**Tax Year 2003**

**September 1, 2002  
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# PRODUCING OTHER MINED MINERALS CAPITALIZATION RATE

## Capitalization Rate Analysis and Results:

In developing a capitalization rate for use in valuing specific income-producing properties consideration is given to the three approaches generally employed in estimating a discount rate. As a matter of practicality, the Bands-of -Investment and Summation Technique approaches are utilized in establishing discount rates for active coal. Data for analysis has been derived in accordance with current Legislative Rule Title 110, Series 1k.

<u>Safe Rate</u>	90 day Treasury Bills	<u>Safe Rate</u>
January	December 2001	3.469%
January	December 2000	5.818%
January	December 1999	4.660%

### Risk Rate Interest differential between Loan Rate and 90 day Treasury Bills

<u>Loan Rate*</u>	<u>Debt Risk Rate</u>
2001 8.922%	5.453%
2000 11.233%	5.415%
1999 9.994%	5.334%

\*Prime plus 2%

### Equity Differential between Equity Rates and 90 day Treasury Bills

<u>Equity Rate**</u>	<u>Equity Risk Rate</u>
2001 [13.5%/(1-.30)]-3.469	15.817%
2000 [13.5%/(1-.30)]-5.818	13.468%
1999 [13%/(1-.29)]-4.660	13.650%

\*\* Moody's Handbook on Common Stocks and Value Line Investment Analysis

### Composite Risk Rate Loan and Equity Rates weighted by industry estimated capital structure.

	<u>Equity Rate</u>	<u>Debt Rate</u>	<u>Composite Risk</u>
2001	9.490%	2.181%	11.671%
2000	8.081%	2.166%	10.247%
1999	8.190%	2.134%	10.324%

Note: Debt equity Ratio Debt 40% Equity 60%

### Non Liquidity Rate Interest differential between 90 day Treasury Bills and a 1 year Treasury Bill which reflects a reasonable time necessary to sell active property.

			<u>1yr T Bill</u>	<u>90 d T Bill</u>	<u>Non Liquidity Rate</u>
January	December	2001	3.481%	3.469%	0.012%
January	December	2000	5.777%	5.818%	0.000%
January	December	1999	5.078%	4.660%	0.418%

### Management Rate Charges for the management of investment portfolios.

Fixed Rate (by Rule) 0.500%

### Inflation Rate

January	December 2001	1.600%
January	December 2000	3.400%
January	December 1999	2.700%

### Property Tax Rate Sixty percent (60%) of State average Class III property tax rate.

January	December 2001	60% of 2.39 =	1.434%
January	December 2000	60% of 2.17 =	1.302%
January	December 1999	60% of 2.25 =	1.350%

### Capitalization Rate

Since the valuation of other mined mineral property is predicated on a three year production average, the capitalization rate is considered in a similar manner.

	<u>2001</u>	<u>2000</u>	<u>1999</u>
Inflation Rate	-1.600%	-3.400%	-2.700%
Safe Rate	3.469%	5.818%	4.660%
Composite Risk Rate	11.671%	10.247%	10.324%
Non Liquidity Rate	0.012%	0.000%	0.418%
Management Rate	0.500%	0.500%	0.500%
Property Tax Rate	1.434%	1.302%	1.350%
<u>Total</u>	15.486%	14.467%	14.552%

Three Yr Average: 14.835%

Rounded to:

14.80%

### CAPITALIZATION RATE - 14.80%

MULTIPLIERS:	%	%
1YR	0.933	9YR 5.149
2YR	1.746	10YR 5.419
3YR	2.454	11YR 5.653
4YR	3.071	12YR 5.858
5YR	3.609	13YR 6.036
6YR	4.077	14YR 6.191
7YR	4.485	15YR 6.326
8YR	4.84	